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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Masao Minobe

Q65488

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09/22/2004

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EXAMINER

NGUYEN, THONG Q

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/810,523	Applicant(s) MINOBE ET AL.	
	Examiner Thong Q Nguyen	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 34,35,38 and 39 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17, 26-31, 33 and 37 is/are allowed.
- 6) ☒ Claim(s) 32 and 36 is/are rejected.
- 7) ☒ Claim(s) 18-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment filed on 6/21/2004. It is noted that in the mentioned amendment, applicant has made amendments to claims 1, 3, and 14.

Election/Restrictions

2. The present application was subjected to a restriction requirement. In the amendment of 6/21/04, applicant has amended the claim 1 to make the device of the claim patentable with respect to the cited art.

3. Claim 1 is generic and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 18-31, directed to other the species have been no longer withdrawn from consideration since all of the claims to this species depend from or otherwise include each of the limitations of an allowed generic claim. However, claims 34-35 and 38-39, directed to the non-elected other species without the allowable subject matter of the structure recited in the generic claim 1 are remain withdrawn from consideration.

In view of the above noted withdrawal of the restriction requirement as to the linked species, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable generic linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no

Art Unit: 2872

longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Information Disclosure Statement

4. The information disclosure statement filed on 3/10/2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

In particular, the Germany reference No. DE 26 34 832 and the essay titled "Introduction a l'optique...l'holographie" listed in the form PTO-1449 have been lined through because applicant has failed to provide a concise explanation of each reference. It is noted that applicant has filed a European search report in English language; however, the search report has just listed pages and figure(s) without any explanation. As such, such a list of page(s) and figure(s) is not considered as a concise explanation of a reference.

Claim Objections

5. Claims 18 and 20 are objected to because of the following informalities.

Appropriate correction is required.

a) In claim 18: on line 2, "comprising and a phase plate" should be changed to – comprising a phase plate--; and

Art Unit: 2872

b) In claim 20: on lines 2-4, the feature thereof "said phase plate...about $7\pi/2$ " is unclear due to the use of the term " $7\pi/2$ " for the difference in phase. Should " $7\pi/2$ " be changed to $-\pi/2$ (see specification in page 18) to make clear the feature claimed?

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 32 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipson, S. G. "Optical Physics" pages 332-334 and figures 12.3-12.4 in view of Goodman "Introduction to Fourier Optics", pages 101-107 (all of record).

The optical apparatus as described in pages 333-334 and shown in figures 12-3 and 12.4 which is considered as a microscope for the function of enlarging image of a sample. The apparatus comprises an illuminating system having a light source (S) and a converging lens (L) for converging parallel light provided by the source (S) on a converged point in the space; a sample (O) disposed in front of the converged point of the illuminating light wherein it is implicit that the sample is mounted on some sample mounting table; and an objective lens (the lens between beam splitting mirror (M) and the plane F') disposed such that the illumination light is incident thereon after the light transmitted through or reflected by the sample is once converged at the converging point. It is noted that the objective lens is positioned in a manner in which its front focal point coincides with the converging point. The author as can be seen in pages 333-334 also suggests the use of masks or obstacles for spatial filtering. However, Lipson

Art Unit: 2872

does not explicitly state that the distance between the diffractive image plane and the sample is adjustable. However it is known to one skilled in the art that an arrangement of an object or a disposal of an object between a lens and its converged point as can be seen in the textbook provided by Goodman in pages 102-107 and fig. 5.5. As stated by Goodman, a change in position of the plate labeled as "Input" with respect to the lens will vary the Fourier pattern and its characteristics. It is also noted that it is within the level of one skilled in the art to utilize additional lens element(s) for the purpose of observing the Fourier image and/or the real image alternatively by focusing the additional lens element(s) on the appropriate plane, as the original real image created by the converging lens would not exist. The use of a mechanism for the disposal of the so-called "Input" with respect to the lens and alignment the filter inside the system is an obvious matter to one skilled in the art. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the system provided by Lipson by adjusting the distance between the diffractive plane and the sample as suggested by Goodman and utilizing additional lens as necessary for the purpose of alternatively observing the Fourier image and/or real image.

Allowable Subject Matter

8. Claims 1-17, 26-31, 33 and 37 are allowed.
9. Claims 18-25 are objected to for the reasons as set forth in this Office action, but would be allowable if rewritten/amended to overcome the objection to the claims.

Response to Arguments

10. Applicant's arguments filed on 6/21/04 have been fully considered but they are not persuasive.

A) Regarding to the rejections of claims 1-5 and 14-17 under 35 USC 102 and 35 USC 103 over the art of Lipson and the combination of art provided by Lipson and Goodman, the amendments to the claims 1, 3 and 14 and applicant's arguments are sufficient to overcome the rejections.

Regarding to the rejection of claims 32 and 36 under 35 103 over the arts of Lipson and Goodman as set forth in the previous Office action and has been repeated in this Office action, it is noted that applicant has not made any amendments to each of claims 32 and 36 to overcome the rejection of each claim over the applied art.

It is also noted that applicant's arguments as listed in the amendment, pages 20-22, have been fully considered but they are not persuasive. It seems that applicant has based on the newly-added features to the claims such as claims 1, 3 and 14 to argue the rejection; however, the materials which are newly-added to claims 1, 3 and 14 are not added to each of claims 32 and 36.

The device as recited in each of claims 32 and 36 is rejected for the reasons set forth in the previous Office action and repeated in this Office action. In case that applicant's arguments provided in the amendment, page 21, the second full paragraph is taken into consideration then applicant's arguments are not persuasive. Regarding to the applicant's argument that the objective lens

Art Unit: 2872

focuses the light on either the sample or a diffraction image plane, the Examiner respectfully disagrees and invited the applicant to review the rejection to the claim. In particular, the Examiner has stated that: "The optical apparatus as described in pages 333-334 and shown in figures 12-3 and 12.4 which is considered as a microscope for the function of enlarging image of a sample. The apparatus comprises an illuminating system having a light source (S) and a converging lens (L) for converging parallel light provided by the source (S) on a converged point in the space; a sample (O) disposed in front of the converged point of the illuminating light wherein it is implicit that the sample is mounted on some sample mounting table; and an objective lens (the lens between beam splitting mirror (M) and the plane F') disposed such that the illumination light is incident thereon after the light transmitted through or reflected by the sample is once converged at the converging point. ***It is noted that the objective lens is positioned in a manner in which its front focal point coincides with the converging point'*** (Examiner's emphasis). As indicated, the front focal point of the objective lens coincides to with the converging point then the objective lens is adapted to be focused on the diffractive image plane perpendicular to the optical axis at the converging point. Applicant should note that each of claims 32 and 36 does not disclose the structure of the light source, the converging lens, the sample and the objective lens as that recited in each of claims 1, 3 and 14. Regarding to the applicant's arguments provided in the amendment, page 21, the last full paragraph, it is noted that such an argument is unclear because applicant

Art Unit: 2872

has not provided any features which applicant's arguments based on those to overcome the rejection. The feature related to the focusing of the objective lens as argued by the applicant as stated in the amendment, page 21, the second paragraph is disclosed by the primary reference used in the rejection. The use of the secondary reference, i.e., Goodman, in the rejection by the examiner is for the purpose of showing that the distance between the diffractive image plane and the sample is able to adjust because Goodman in his textbook in pages 102-107 disclose such an adjustment. In this aspect, the applicant has not provided any argument(s).

Conclusion

11. The prior art except the Germany reference No. DE 26 34 832 and the essay titled "Introduction a l'optique...l'holographie" made of record and not relied upon is considered pertinent to applicant's disclosure.

12. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

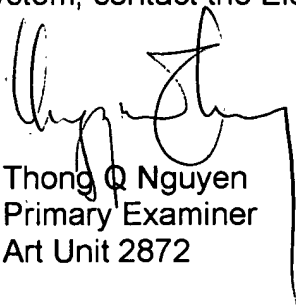
Art Unit: 2872

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q Nguyen
Primary Examiner
Art Unit 2872
